

Date: Thursday, 24/07/2008 11:30:50 AM  
 User: Jean-Luc Menard

## Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: ARM ASSEMBLY
Job Number	: 40741		
Estimate Number	: 13294		
P.O. Number	:	Part Number	: D3696041
This Issue	: 24/07/2008 S.O. No. :	Drawing Number	: D3696 PRELIM 08.07.21
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: 1 / Type : MACHINED PARTS	Drawing Revision	: PRELIM
Previous Run	: 39691	Material	:
Written By	: <u>JLM 08.07.26</u>	Due Date	: 31/07/2008 Qty: 1 Um: Each
Checked & Approved By	:		
Comment	: Est Rev:A New Issue 08-05-01 JLM Verified By:EC Est Rev:B 08-07-22 redesign part (prelim) DD verified by:EC		

Additional Product



Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

1.0-	M7075T6B1000X1000	7075 T6 BAR 1.00 x1.00
------	-------------------	------------------------



Comment: Qty.: 1.5330 f(s)/Unit Total : 1.5330 f(s)

7075 T6 BAR1"x1"

Batch: M107984JL 08/07/27

2.0	BAND SAW	BAND SAW
-----	----------	----------



Comment: BAND SAW

Cut blank 17.750" long

JL 08/07/27

3.0	MILLING CONV.	CONVENTIONAL MILLING MACHINE
-----	---------------	------------------------------



Comment: CONVENTIONAL MILLING MACHINE

1- Mill as per dwg D3696

2-Deburr as per dwg D3696

JL 08/07/27

4.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
-----	-----	--



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

JL 08/07/27

5.0	QC8	SECOND CHECK
-----	-----	--------------



Comment: SECOND CHECK

**ENGINEERING  
APPROVAL**
JLM 08.07.28JL 08/07/27

# Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: ARM ASSEMBLY

Job Number: 40741

Part Number: D3696041

Job Number:



Seq. #: Machine Or Operation: Description :

6.0 HAND FINISHING1 HAND FINISHING RESOURCE #1



(IX)

Comment: HAND FINISHING RESOURCE #1  
Chemical Conversion Coat as per QSI 005 4.1

27/1/12 08/07/28

7.0 POWDER COATING POWDER COATING



(IX)

Comment: POWDER COATING  
1- mask prior to painting as per dwg (see note 8)  
Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3

Start Time: 1:50  
Temp: 320 °F  
Finish Time: 2:20  
M. 08/07/28

START TIME:  
OVEN TEMPERATURE:  
FINISH TIME:

1:30  
320 °F  
2:00

8.0 QC3 INSPECT POWDER COAT/CHEMICAL CONVERSION



08-08-05

Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

MS

FD 08/07/28

9.0 D37991 Oilite Bronze Bushing



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
Oilite Bronze Bushing  
Batch: M107881

Jul 0

10.0 D38013 Hand Retractable Spring Plunger



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
Hand Retractable Spring Plunger  
Batch: M108005

Jul 0

11.0 MS21209C8 20 Heli Coil Insert



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
Heli Coil Insert  
Batch: M108066

Jul 0

12.0 SMALL FAB 1 SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1  
1-Install Helicoil

Jul 08-06-24

# Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: ARM ASSEMBLY

Job Number: 40741

Part Number: D3696041

Job Number:



Seq. #:

Machine Or Operation:

Description :

2-Press Bushing

3-Install Plunger

13.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

14.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: \_\_\_\_\_

D 3780-041

# B41919

15.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



POSITIVE RECALL

EFFECTIVE

DATE 08.07.29

AUTH 12

RELEASED

DATE 09.02.17

Material  
Certs Required  
Jul

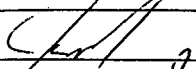

U 09.02.18

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 40741
<b>Description:</b> arm		<b>Part Number:</b> D3696-1
<b>Inspection Dwg:</b> D3696	<b>Rev:</b> B	<b>Page 1 of 1</b>

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

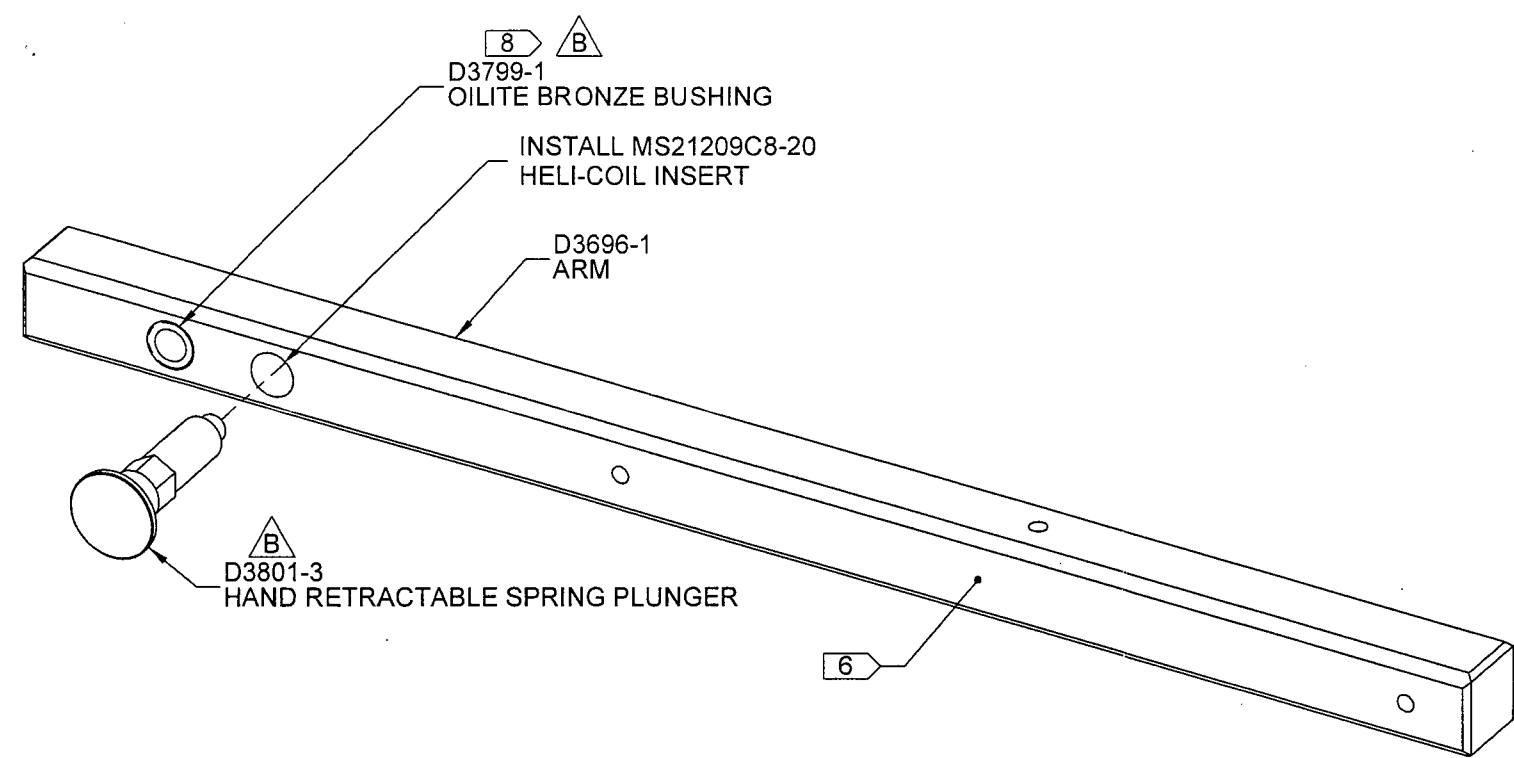
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.000	$\pm .010$	1.000	✓			
.990	$\pm .010$	.986	✓			
.13x45°	$\pm .030$	.135x45°	✓			
.495	$\pm .010$	.493	✓			
5.500	$\pm .010$	5.500	✓			
Ø.201	$\pm .005$ $- .001$	.201	✓			
Ø.500x.300 deep	$\pm .010$	.502x.300	✓			
Ø.566	$\pm .001$ $- 0$	.566	✓			
.06x45°	$\pm .03$	.068x45°	✓			
.750	$\pm .010$	.750	✓			
9.500	$\pm .010$	9.499	✓			
17.50	$\pm .030$	17.50	✓			
1.250	$\pm .010$	1.250	✓			
1.800	$\pm .010$	1.800	✓			
.500	$\pm .010$	.498	✓			

<b>Measured by:</b> JL	<b>Audited by:</b> 	<b>Prototype Approval:</b> 
<b>Date:</b> 08/07/28	<b>Date:</b> 08.07.28	<b>Date:</b> 08.07.28

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	

P/O D3696-041

QTY -041	P/N	DESCRIPTION
X	D3696-041	ARM ASSEMBLY
1	D3696-1	ARM
1	MS21209C8-20	HELI-COIL, SCREW LOCKING (RED)
1	D3799-1	OILITE BRONZE BUSHING
1	D3801-3	HAND RETRACTABLE SPRING PLUNGER

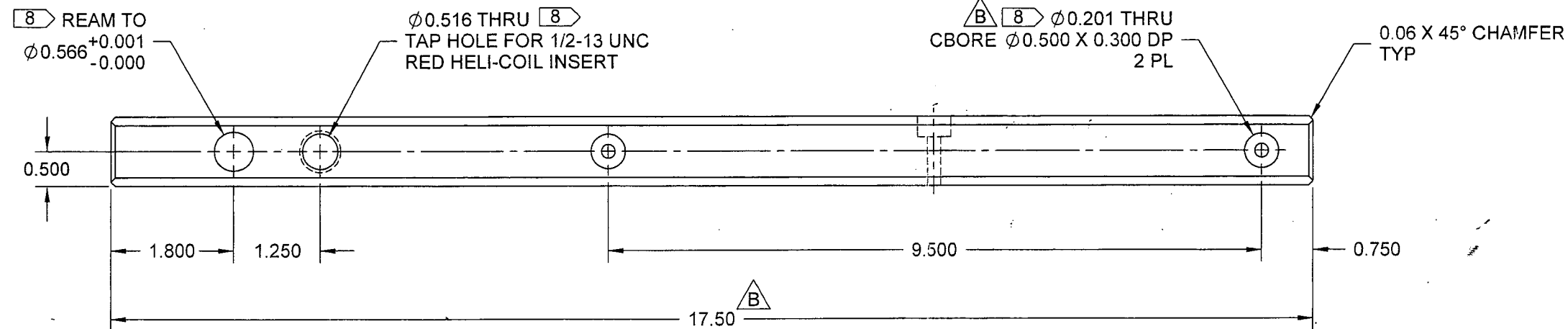
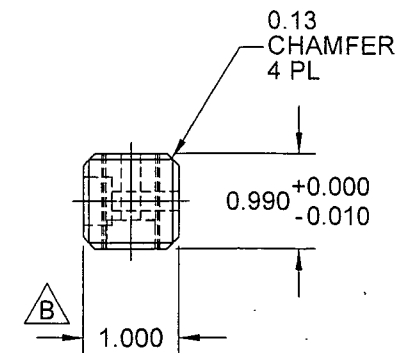
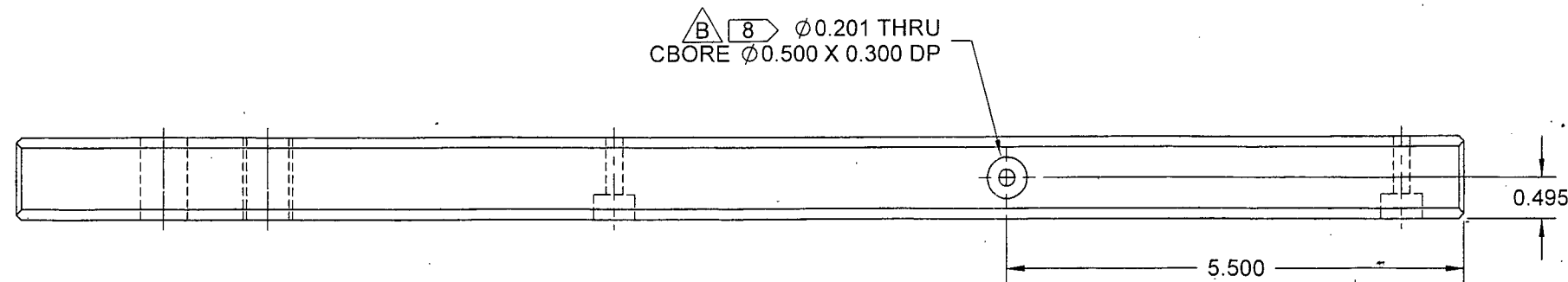


D3696-041 ARM ASSEMBLY

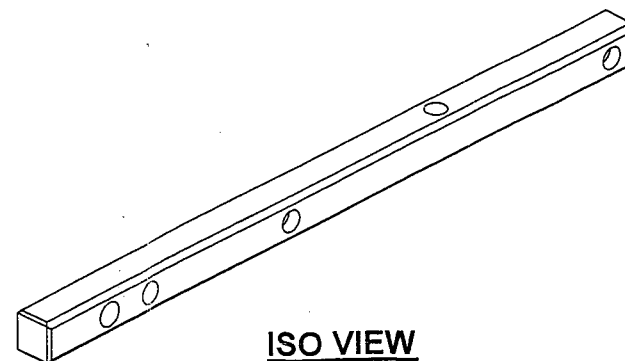
40741  
**PRELIMINARY ISSUE**  
08.07.21  
Per ECU # 08-501P

- D3696-041 NOTES:
- 1) MATERIAL: N/A
  - 2) FINISH: N/A
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: N/A
  - 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3696-041" USING FINE POINT PERMANENT INK MARKER AS SHOWN
  - 7) WEIGHT: 1.68 lbs
  - 8) FACE D3799-1 OILITE BRONZE BUSHING FLUSH TO D3696-1 ARM AS REQUIRED ON BOTH SIDES PRIOR TO PAINTING

B	P/N D3799-1 WAS BNT-137 (ZN D6-1); P/N D3801-3 WAS PRT-12 (ZN C7-1) - REASON: PURCHASED PARTS NOW PROCURED THROUGH D3799 AND D3801 SPEC CONTROL DRAWINGS; ADDED Ø0.201 HOLE AND CBORE (ZN C6-2 AND D5-2); 17.50 WAS 19.50 (ZN B5-2); 1.000 WAS 0.990 +0.000/-0.010 (ZN C2-2); POCKETS REMOVED REASON: ELIMINATED FWD-AFT ARMREST ADJUSTMENT	MB	08.07.17
A	NEW ISSUE	MB	08.04.18
REV.	DESCRIPTION	BY	DATE
DESIGN	1/5	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	1/5		
CHECKED	1/5	DRAWING NO.	REV. B
MFG. APPR.		D3696	SHEET 1 OF 2
APPROVED		TITLE	SCALE
DE APPR.		ARM ASSEMBLY	NTS
DATE	08.07.17	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



# **D3696-1 ARM**



**ISO VIEW**

## **D3696-1 NOTES:**

- 1) MATERIAL: 7075-T6 (OR T651/T6510/T6511/T62) ALUMINUM BAR  
PER AMS-QQ-A-225/9 (OR AMS 4122/4123/4186/4187) OR  
PER AMS-QQ-A-200/11  
(REF. DART SPEC. M7075T6B)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT GREY SANDTEX (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 1.62 lbs
- 8) MASK PRIOR TO PAINTING

DESIGN		<b>DART AEROSPACE LTD</b>	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		<b>D3696</b>	SHEET 2 OF 2
APPROVED		TITLE	SCALE
DE APPR.		<b>ARM ASSEMBLY</b>	NTS
DATE	<b>08.07.17</b>	<small>COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

40741  
**PRELIMINARY ISSUE**  
08.07.21  
PERECN #08.59 P

Date: Thursday, 24/07/2008 11:30:50 AM  
 User: Jean-Luc Menard

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : ARM ASSEMBLY
Job Number : 40741	
Estimate Number : 13294	
P.O. Number :	Part Number : D3696041
This Issue : 24/07/2008 S.O. No. :	Drawing Number : D3696 PRELIM
Prsht Rev. : NC	Project Number : N/A
First Issue : 11	Drawing Revision : PRELIM
Previous Run : 39691	Material :
Written By : <u>JL 07-07-26</u>	Due Date : 31/07/2008 Qty: 1 Um: Each
Checked & Approved By :	
Comment : Est Rev:A New Issue 08-05-01 JLM Verified By:EC	
Est Rev:B 08-07-22 redesign part (prelim) DD verified by:EC	

## Additional Product



Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

1.0	M7075TEB1000X1000	7075 T6 BAR 1.00 x1.00
-----	-------------------	------------------------



camps 6281



Comment: Qty.: 1.5330 f(s)/Unit Total : 1.5330 f(s)

7075 T6 BAR1"x1"

Batch: M107984

RCP 7868

JL 07/07/27

2.0	BAND SAW	BAND SAW
-----	----------	----------



Comment: BAND SAW

Cut blank 17.750" long

JL 08/07/27

3.0	MILLING CONV.	CONVENTIONAL MILLING MACHINE
-----	---------------	------------------------------



Comment: CONVENTIONAL MILLING MACHINE

1- Mill as per dwg D3696

2-Deburr as per dwg D3696

JL 08/07/27

4.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
-----	-----	--



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

JL 08/07/27

5.0	QC8	SECOND CHECK
-----	-----	--------------



Comment: SECOND CHECK

**ENGINEERING  
APPROVAL**

30.07.28

JL 08/07/28





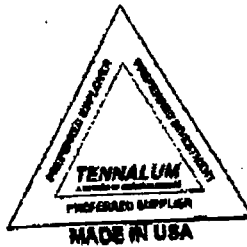
12-05-'08 13:58

11-01-01 10:41 FROM

1-101 1000/002 0-020

# KAISER ALUMINUM FABRICATED PRODUCTS

Tennaluna  
PO Box 669  
Jackson, TN 38302  
731-423-2811



**CERTIFIED TEST REPORT**  
<http://www.KaiserAluminum.com>

CUSTOMER PO NUMBER: <b>01-37236</b>		CUSTOMER PART NUMBER: <b>21430</b>		PRODUCT DESCRIPTION: <b>Cold Finished Square</b>	
KAISER ORDER NUMBER: <b>633517</b>	LINE ITEM: <b>1</b>	SHIP DATE: <b>11/06/2007</b>	ALLOY: <b>7075</b>	TEMPER: <b>T851</b>	
WEIGHT SHIPPED: <b>2116 lbs.</b>	QUANTITY: <b>145 pcs.</b>	BL NUMBER: <b>27001</b>	DIAMIDAPT/THKNS: <b>1.000 in.</b>	WIDTH: <b>0.000 in.</b>	LENGTH: <b>144.0 in.</b>
SHIP TO:			SOLD TO:		

## Actual Physical Properties

Test Code: 1000 AC

Lot Number	LONG. UTS ksi	LONG. YTS ksi	LONG. ELONG. %
20097375	83.6	76.8	14.0
	83.7	76.9	14.0
	83.5	76.9	14.0
20098082	84.5	78.1	14.0
	84.6	78.4	14.0
	84.9	78.4	14.0
	84.2	77.9	13.5

DATE RCVD 11/7/07  
IAC 21430  
APPROVED BY [Signature]

## Chemical Composition, WT. % (Aluminum Remainder)

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	OTHERS EACH	OTHERS TOTAL	Lot
Actual	0.12	0.27	1.5	0.04	2.7	0.20	5.9	0.03			20097375
Actual	0.13	0.26	1.5	0.05	2.7	0.20	5.9	0.02			20098082
Max	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.15	
Min			1.2		2.1	0.18	5.1				

## Specifications

Standard: ISO 9001, ASTM B211-03, AMS 4123H, AMS-QQ-A-225/9 Non-Standard: A97075-30-16

## CERTIFICATION

Kaiser Aluminum & Chemical Corporation ("Kaiser") hereby certifies that the metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

John Rennekamp, Quality Manager

*John Rennekamp*

Plant Serial: 97173

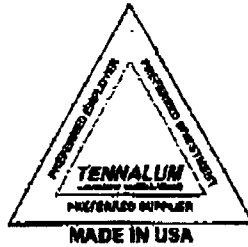
Kaiser Order Number: 633517

Line Item: 1

# **KAISER ALUMINUM**

**FABRICATED PRODUCTS**

Tennalum  
PO Box 669  
Jackson, TN 38302  
731-423-2811



**CERTIFIED TEST REPORT**  
<http://www.KaiserAluminum.com>

## **Miscellaneous Notes**

Made in USA

This material was melted and manufactured in the USA. Mercury is not a normal contaminant in aluminum alloys. Neither mercury nor any of its compounds were utilized by Kaiser Aluminum in the manufacture of this material. AS9100B:2004 This material meets the requirements of (cold finished) T6 temper, AMS 4122J and QQ-A-225/9E (CANCELLED). NAFTA - YES.

## **CERTIFICATION**

Kaiser Aluminum & Chemical Corporation ("Kaiser") hereby certifies that the metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

John Rennekamp, Quality Manager

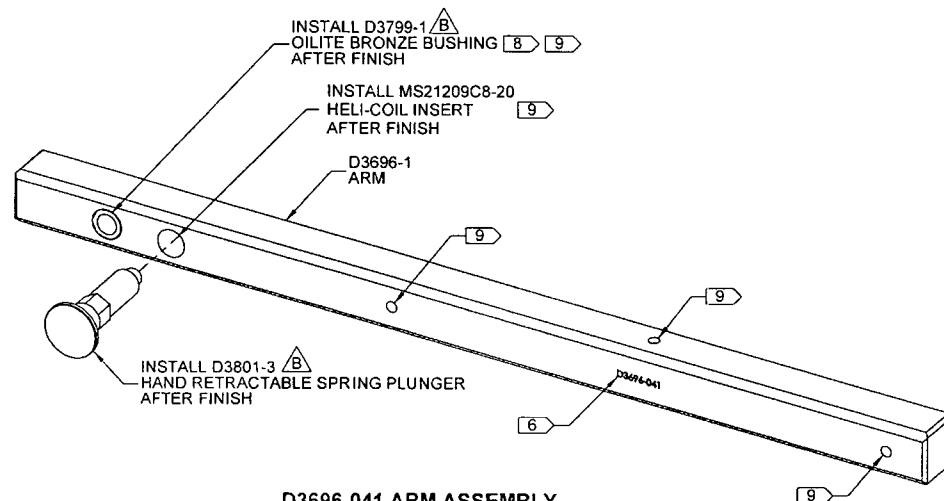
Plant Serial: 97173

Kaiser Order Number: 633517

Page 2 of 2

Line Item: 1

QTY -041	P/N	DESCRIPTION
X	D3696-041	ARM ASSEMBLY
1	D3696-1	ARM
1	MS21209C8-20	HELI-COIL, SCREW LOCKING (RED)
1	D3799-1	OILITE BRONZE BUSHING
1	D3801-3	HAND RETRACTABLE SPRING PLUNGER



**D3696-041 ARM ASSEMBLY**

**RELEASED**  
9/6/15 MB

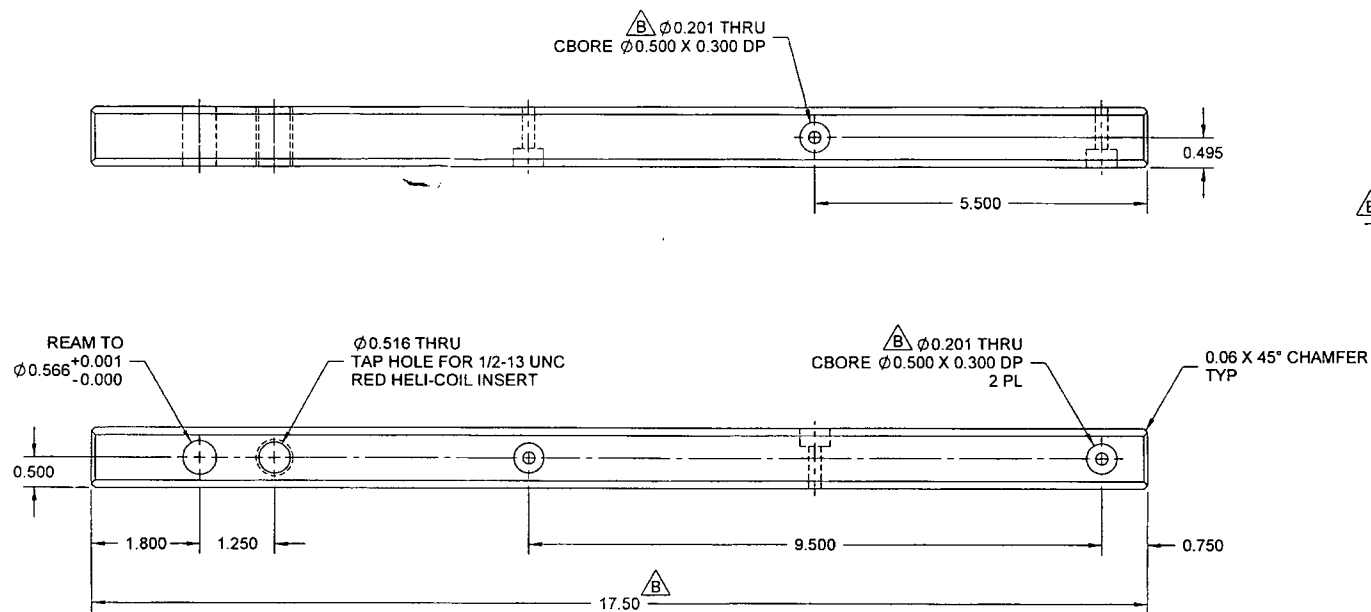
46741

**D3696-041 NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT GREY SANDTEX (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3696-041" USING FINE POINT PERMANENT INK MARKER LOCATED APPROXIMATELY AS SHOWN
- 7) WEIGHT: 1.68 lbs
- 8) FACE D3799-1 OILITE BRONZE BUSHING FLUSH TO D3696-1 ARM AS REQUIRED ON BOTH SIDES PRIOR TO POWDER COATING
- 9) MASK HOLES AS SHOWN PRIOR TO POWDER COATING

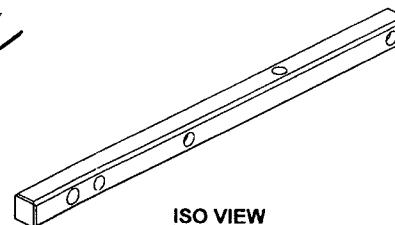
B	P/N D3799-1 WAS BNT-137 (ZN D6-1); P/N D3801-3 WAS PRT-12 (ZN C7-1) - REASON: PURCHASED PARTS NOW PROCURED THROUGH D3799 AND D3801 SPEC CONTROL DRAWINGS: ADDED Ø0.201 HOLE AND CBORE (ZN C6-2 AND D5-2); 17.50 WAS 19.50 (ZN B5-2); 1.000 WAS 0.990 ±0.000/-0.010 (ZN C2-2); POCKETS REMOVED REASON: ELIMINATED FWD-AFT ARMREST ADJUSTMENT	MB	08.07.17
A	NEW ISSUE	MB	08.04.18
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	08.07.17		

<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. <b>D3696</b>	REV. B SHEET 1 OF 2
TITLE <b>ARM ASSEMBLY</b>	SCALE NTS
COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



**D3696-1 ARM**





40741



**D3696-1 NOTES:**

- 1) MATERIAL: 7075-T6 (OR T651/T6510/T6511/T62) ALUMINUM BAR  
PER AMS-QQ-A-225/9 (OR AMS 4122/4123/4186/4187) OR  
PER AMS-QQ-A-200/11  
(REF. DART SPEC. M7075T6B)
- 2) FINISH: SEE SHEET 1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 1.62 lbs

**RELEASED**  
09/05/02 M

DESIGN		<b>DART AEROSPACE LTD</b>	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D3696	SHEET 2 OF 2
APPROVED		TITLE	SCALE
DE APPR.		ARM ASSEMBLY	NTS
DATE	08.07.17	COPYRIGHT © 2008 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			